UHC: markets, profit, and the public good 1

What is the private sector? Understanding private provision in the health systems of low-income and middle-income countries

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Private health care in low-income and middle-income countries is very extensive and very heterogeneous, ranging from itinerant medicine sellers, through millions of independent practitioners—both unlicensed and licensed—to corporate hospital chains and large private insurers. Policies for universal health coverage (UHC) must address this complex private sector. However, no agreed measures exist to assess the scale and scope of the private health sector in these countries, and policy makers tasked with managing and regulating mixed health systems struggle to identify the key features of their private sectors. In this report, we propose a set of metrics, drawn from existing data that can form a starting point for policy makers to identify the structure and dynamics of private provision in their particular mixed health systems; that is, to identify the consequences of specific structures, the drivers of change, and levers available to improve efficiency and outcomes. The central message is that private sectors cannot be understood except within their context of mixed health systems since private and public sectors interact. We develop an illustrative and partial country typology, using the metrics and other country information, to illustrate how the scale and operation of the public sector can shape the private sector's structure and behaviour, and vice versa.

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This is the first in a **Series** of four papers about UHC and private health care

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Introduction

In this report, the "private sector" refers to the totality of privately owned institutions and individuals providing health care, including private insurers. In low-income and middle-income countries (LMICs) the sector is generally large, poorly documented, and very heterogeneous, ranging from itinerant drug peddlers and individual clinical practitioners to corporate hospital chains and international private insurers. Although most private health care enterprises operate for profit, many non-profit organisations also exist, avowing religious and charitable motivations. In some LMICs, private sector health care largely serves better-off people; in others, many of the poor rely on private provision. This economic and social patterning of private sector organisation is partly shaped by, and interacts with, the organisation and behaviour of the public sector in health care. The private sector can therefore only be understood—and effectively regulated—by understanding the mixed health systems of which it forms part.

Policy makers seeking to move health systems towards universal health coverage (UHC) must identify and ensure appropriate roles for private providers and for health markets.[1,2] This in turn requires a better understanding than is presently available of the characteristics of the

Search strategy and selection criteria

For this report, we use international datasets from WHO World Health Statistics 2015[4] and World Bank comparative national income statistics.[5] We also did a new analysis of country-level data including the Indian National Sample Survey Organisation surveys for 1986–87, 2000–01, 2006–07, 2011 and 2014;[6] data from successive Demographic and Health Surveys (DHS) for four low-income and middle-income countries;[7] National Health Accounts; and a range of secondary data sources. We searched PubMed and social science databases in June–October, 2010, updated in October–December, 2013 and October–November, 2014, using keywords including "private sector", "commercial", "business", "market", and "public–private", in association with "health system" and "health sector", restricting our results to low-income and middle-income countries. For the individual country studies, further searches were done including the grey literature to find relevant qualitative evidence.

Key messages

- The private sector in health is strongly influenced by, and also influences, the public sector
- A useful typology of types of private sector in different mixed systems can begin from three metrics: the private share in total health expenditure; the private share in primary and secondary care episodes; and the extent of reliance of the public sector on private fee payment
- Qualitative information is needed to deepen understanding in each specific case
- Where the private sector dominates the health system, the poor struggle to access fee-for-service care, which is generally of low quality
- A reasonably competent and highly accessible public sector can generate a complementary, reasonable-quality private sector
- An insurance-funded private sector at the top of a stratified system reinforces inequality and might display cost escalation
- A dominant but highly commercialised public sector constrains private provision while excluding the poor
- Making the public sector more accessible can reduce both exclusion and reliance by the poor on low-quality private providers and medicine sellers

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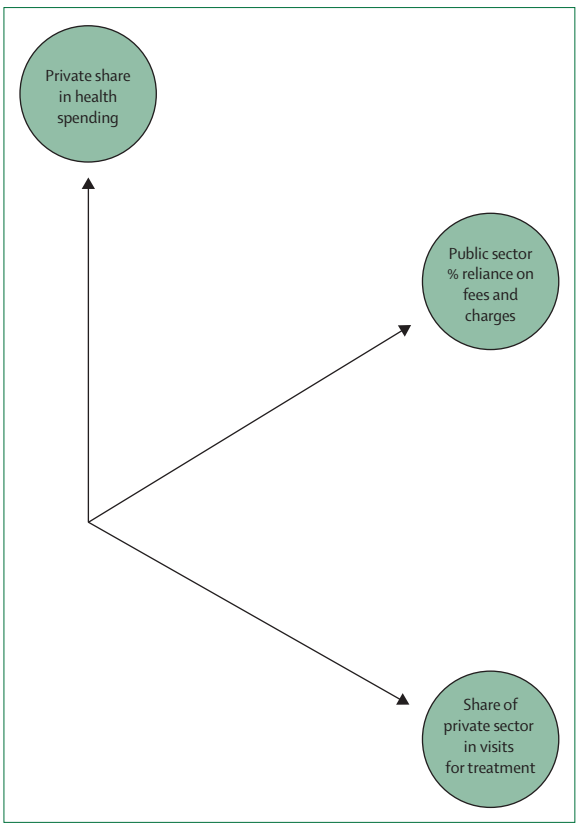

Figure 1: **Three dimensions for classification of the private sector within health systems**

private sector within particular health systems, in order to devise effective interventions.[3] In this report, we propose a set of metrics, from existing data,[4–7] that provide a useful starting point for measuring, describing, and classifying the private sector in mixed health systems. We illustrate the usefulness of the metrics, in association with other country-level data, by extracting an initial typology to illustrate some key patterns of interaction between the public and private sectors.

Metrics for understanding private sectors in mixed health systems

Our proposition in this Series as a whole is that, despite apparent great heterogeneity, key patterns and dynamics to assist policy towards private health sectors can be identified. In this report, we propose three metrics, using existing data, that can be combined to provide a clear starting point. The metrics are: the extent and pattern of private finance within health-care expenditure as a whole (demand side); the scale and level of the private sector enterprises in health care, indicated by their weight in the use of ambulatory and primary, and clinic-based and secondary, care (supply side); and the accessibility of the public sector, proxied by the extent to which the public provision relies on fees (commercialisation). We discuss the sources and brief justification for these metrics below.

Size and pattern of the share of private finance in total health expenditure

Private expenditure on health care includes out-of-pocket spending and also expenditure by insurers (pre-paid plans). The WHO health expenditure database[8] has reasonably comparable cross-country data, despite conceptual and measurement problems.[9] The extent of each type of private finance is a proxy indicator of the characteristics of the private supply sector, since private insurance generally funds larger licensed private providers, whereas much out-of-pocket spending funds smaller scale, often unlicensed, provision. However, out-of-pocket spending also includes fees for public services and medicine purchases. Consequently, on a cross-country basis, the share of private contributions in total health expenditure is not correlated with the (patchy) available data about the share of private beds in total hospital beds; the share of private facilities in the total number of primary facilities; or the share of private providers' consultations in total medical consultations.[10,11] It follows that the share of private spending in total health expenditure does not measure the share of private supply in total supply of health care.

Share of the private sector in primary and secondary health care episodes

No cross-country comparable data exist for private sector capacity levels and activity rates. We therefore use various country-level Demographic and Health Surveys (DHS), WHO World Health Surveys, and other household survey data, alongside facility surveys. Use of different types of facility provides a better metric for the weight of the private sector than capacity measures, such as number of hospitals and dispensaries, because the facilities vary in size and small-scale unregistered dispensaries and shops are often omitted from surveys. Different countries and surveys use very different classifications of types of facility and other sources of treatment; the DHS can provide somewhat more comparable data but only for a restricted set of reproductive and child health needs.

Extent of public sector facilities' reliance on out-of-pocket fees and charges

Public sector charging shapes the private sector's market context, affecting who the private sector serves, with what quality, and at what price. In many low-income and middle-income countries, public sector health care became more commercialised in the 1980s and 1990s, depending increasingly on fees-for-service from out-of-pocket payments. The payments for medicines and tests, procedures, and beds might go to individuals or to institutions, but the broad effect was to orient the public providers to respond to market incentives. Some public sectors therefore took on a commercialised character, competing with the private sector in a health-care market while remaining publicly owned; globally, a part reversal of this trend is now taking place.

	Dimension 1 (private share in health spending)				Dimension 2 (share of private sector in visits for treatment)		Dimension 3 (public sector % reliance on fees and charges)
	Column 1: private % of THE in 2000	Column 2: private % of THE in 2012	Column 3: OOP payments as % of THE in 2012	Column 4: prepaid plans plus social security as % of THE in 2012	Column 5: private sector % of total outpatient visits, primary care visits, or all visits (year)	Column 6: private sector % of inpatient episodes or hospital visits (year)	Column 7: OOP payments % of total public facilities' expenditure (year)
India	73%	70%	61%	4%	75% (2014)	62% (2014)	2% (2014)
Nigeria	67%	67%	64%	2%	82% (2008–09)*	NA	64% (2005)
Sri Lanka	52%	61%	51%	3%	50–60% (2008)	5–10% (2008)	0% (2008)
Thailand	44%	21%	12%	14%	34% (2011)	10% (2011)	10% (2007)
Argentina	46%	31%	20%	45%	45% (2010)	47% (2010)	0% (2014)
South Africa	59%	52%	7%	43%	29% (2008)	18% (2008)	8% (2005)
China	62%	44%	34%	41%	18% (2003)	3% (2003)	87% (2001)
Malawi	54%	44%	10%	2%	29% (2003)	30% (2003)	9% (2005–06)
Tanzania	57%	61%	32%	3%	40% (2007)	22% (2007)	38% (2009–10)
Nepal	75%	61%	49%	0%	65% (2003)	46% (2003)	7% (2008–09)
Ghana	50%	32%	29%	17%	36% (2003)	35% (2003)	25% (2009)

*For inpatient plus outpatient care. Sources of data: columns 1–4;[12] India columns 5–6,[13] column 7 see below; Nigeria column 5,[14] column 7;[15] Sri Lanka column 5,[16] column 6,[17] column 7;[18] Thailand columns 5–6,[19] column 7;[20] Argentina column 5,[21] column 6,[22] column 7;[23] South Africa columns 5–6;[24] column 7;[25] China columns 5–6,[26] column 7;[27] Malawi columns 5–6,[26] column 7;[28] Tanzania columns 5–6,[29] column 7;[30] Nepal columns 5–6,[26] column 7;[31] Ghana columns 5–6,[26] column 7.[32] For India, data in column 7 were calculated as the ratio of receipts from user fees and other charges to patients (codes 020-01, 020-02, and 020-03) to total government expenditure at facility level from state and central government budgets for 20 major states in 2013–14. For Nigeria, column 5 percentages of all visits including medicines sellers but not herbalists or home treatment; column 7 calculated from table 3.8 p 14 in Soyibo and colleagues' report.[15] Thailand: columns 5 and 6 calculated from data for all visits to a facility for illness during the previous month. South Africa: columns 5 and 6 refer to outpatient and inpatient visits; column 7 was calculated from data based on some extrapolations from 1990s National Health Accounts; the authors comment that out-of-pocket expenditure is probably underestimated in their data.[25] China: in column 7, the data are for rural health centres only in 2001, and do not include urban facilities. Malawi: column 7 percentage is for hospitals only, since the source does not break down ambulatory care expenditure by public or private providers. Tanzania: column 5 percentages of visits to primary providers (dispensaries, individual doctors, and pharmacies); column 6 percentages of visits to hospitals and health centres. Nepal: column 7 refers to government hospitals and other facilities; data taken from the National Health Accounts, which states that total government health expenditure in 2008–09 was NPR16 729, whereas the out-of-pocket costs in government hospitals or facilities were NPR1151. THE=total health expenditure. OOP=out of pocket. NA=not available.

Table 1: **Key indicators for each dimension (case study countries)**

We measure public sector accessibility using country-level data for the proportionate reliance of the public sector on fees and charges, mainly estimated from information in National Health Accounts.

These three metrics (the extent and pattern of private finance within health-care expenditure as a whole; the scale and level of the private sector enterprises in primary and secondary health care; and the extent to which the public provision relies on fees) locate a country's private sector within its mixed health system along three dimensions (figure 1). This diagram is to be understood not as a box diagram of the type used to analyse moves towards UHC, but rather a three-dimensional space in which different mixed health systems can be located.

Five types of private sector in mixed systems

We demonstrate the use of this approach to measurement and classification by generating an initial typology of five key types of private sector in mixed systems. In the absence of global comparative data for dimensions 2 and 3, we illustrate each type with one or more country cases using a range of data sources. The five types of private sector in mixed systems are: a dominant private sector (eg, India and Nigeria); a non-commercialised public sector and complementary private sector (eg, Sri Lanka and Thailand); a private sector at the top of a stratified system (eg, Argentina and South Africa); a highly commercialised public sector (eg, China); and a stratified private sector shaped by low incomes and public sector characteristics (eg, Tanzania, Ghana, Malawi, and Nepal).

In the following paragraphs, we refer to the data in table 1 for the three dimensions.

Dominant private sector: India and Nigeria

Countries with a dominant private sector display globally very high shares of out-of-pocket spending in total health expenditure, a private sector dominating activity in both primary and secondary care, and deteriorated public sectors, with varying reliance on fee payments (table 1). India and Nigeria share three interacting characteristics: a globally high private share of total health expenditure and low ratio of public health expenditure to gross domestic product (GDP); a private sector—including unlicensed sole practitioners, shops, and medicines vendors (table 2)—that dominates health-care provision at all levels and incomes; and highly deteriorated public health sectors in which, in Nigeria's case, fees and charges create an additional barrier to care (table 1), and in both countries, scarcity of public sector availability forces patients to turn elsewhere. In both countries, this pattern

	Own account enterprises*			Establishments with employees		
	2000–01	2006–07	2010–11	2000–01	2006–07	2010–11
Hospital service	0·7%	1·2%	3·6%	15·4%	14·9%	25·7%
Medical and dental practices	52·1%	55·5%	63·3%	58·4%	47·1%	48·9%
Indian systems of medicine	28·7%	24·2%	23·0%	13·2%	18·1%	12·9%
Nursing and physiotherapy	15·3%	14·4%	5·2%	1·5%	7·3%	1·9%
Diagnostics or pathology	1·4%	2·3%	2·4%	9·2%	11·3%	9·0%
Others	1·8%	2·4%	2·5%	2·3%	1·4%	1·7%
All	100%	100%	100%	100%	100%	100%
Total number of enterprises	1 075 000	785 000	736 000	229 000	268 000	285 000

Data are authors' estimates from the National Sample Survey Office, for the respective years. *An own account enterprise is an enterprise or undertaking run by household labour, usually without any hired worker employed on a regular basis.[6]

Table 2: **Percentage share of different enterprise types in India, 2000–01, 2006–07, and 2010–11**

has been associated with accelerated private sector growth; low-quality private provision for the low-income population; high levels of out-of-pocket health spending; and a lack of safety net access for poor people to accessible and competent public provision. The pattern and its consequences are illustrated here by the Indian case.

India has long been one of the nations with the lowest level of public health spending.[13] As a percentage of GDP, the Indian Government spent just 1·1% on health care in 2008–09.[33] Inadequate government financing and neglect of public provision of health services has led to excessive dominance of the private sector. Nationally representative large-scale household surveys show a sharp increase in the role of private health-care provision in the past two decades. According to calculations using household-level data from National Sample Survey Office,[34] dominance of outpatient care (allopathic and non-allopathic providers) by private general practitioners and pharmacists consolidated at a high proportion of visits in both rural areas (74·3% in 1986–87 and 71·4% in 2014) and urban areas (72·8% in 1986–87 and 78·8% in 2014), whereas private inpatient care also rose sharply from 1986–87 (40·0% in rural areas and 39·6% in urban areas) to 2014 (58·1% in rural areas and 68·0% in urban areas). India's private sector is also very heterogeneous (panel 1).

Furthermore, within a plethora of publicly funded health insurance schemes, such as Rastriya Swasthiya Bima Yojana (RSBY) and several state government-sponsored insurance models, launched in the past 5–7 years, the private sector receives more than 80% of the total reimbursement claims.[39]

The private sector payment mechanism in India is overwhelmingly fee-for-service and the real (inflation-adjusted) price of admission to hospital has doubled in the past 15 years, expanding much faster than in the government sector.[40] The financial burden of health care on Indian households is high and rising. Out-of-pocket health expenditure was estimated to account for 6·8% of household resources and 12·1% of non-food expenditure in 2011–12. Catastrophic out-of-pocket payments have increasingly lead to impoverishment through sale of valuable assets, running down savings, and borrowing money at usurious interest rates from private money lenders.[40]

Panel 1: **Heterogeneity of India's private health sector**

The heterogeneity of India's private sector is extreme: from fledgling super-specialty groups listed on stock exchanges to general practitioners and a various "quacks" and traditional healers.[35–38] Enterprise surveys by the National Sample Survey Organisation track this heterogeneity, estimating that just over 1 million private health-care enterprises exist, of which 75% are micro-enterprises and the rest are medium to large medical establishments. The share of allopathic enterprises, and of hospitals, has risen (table 2). The mode of ownership is overwhelmingly (98%) sole proprietorship. Only 66% of the medical facilities are registered under any act or society.

Private sector complementing universalist public sector: Sri Lanka and Thailand

Countries with this type of private sector have moderate-to-low private expenditure shares, mainly out-of-pocket expenditures; moderate private share of primary care and low private share of hospital care; and very low or no public sector fees (table 1).

Sri Lanka's and Thailand's health systems differ substantially, but they share a key characteristic: public spending supports an accessible and universalist public sector whose role and limitations shape private sector investment into complementary roles within the health system. Both countries obtain good health outcomes from this pattern.[16,41] We illustrate this pattern with data from Sri Lanka.

In Sri Lanka, the private-to-public expenditure ratio has been fairly stable since the mid-1990s, at around 55% private and 45% public, with private expenditure largely out of pocket (82%).[17] Most out-of-pocket spending on health goes on private practitioners' fees (70% in the poorest quintile), except in the highest-income quintile where a third is spent on private hospital care (figure 2). An internationally low percentage spent on drugs can probably be attributed to widespread availability of low-cost or free drugs through the public system.

In Sri Lanka, most physicians working in private practice also work in the public system, and private providers offer more than half of primary care; however, 90–95% of inpatient care remains in the public sector. Similarly, preventive care by the private sector is minimal, with nearly 100% in the public sector. Curative

care is more equally distributed between the private sector (50–60%) and the public sector (40–50%).[43] A surge in private investment in health care has taken place in Sri Lanka since the 1980s, although most capital formation in health care remains public. Nearly 74% of private health facilities have sole owners; 88% of the small clinics (those with <5 employees) and 60–65% of the medium and larger hospitals and laboratories were owned by one individual. As much as 75% of private outpatient care is provided by a sole proprietor, some of whom contract one or more practitioners as employees.[18] About half of private beds are in the capital city Colombo, and private inpatient facilities tend to be small (20–30 beds), whereas 72% of private facilities have at least one operating theatre. The private sector also provides pharmacies, laboratories, and imaging facilities. Only the few large facilities rely to any extent on insurance payments.[16]

The public sector in Sri Lanka continues to provide accessible care. Although those on lower incomes use primary care less than do the better off—suggesting cost and other barriers—the burden of out-of-pocket payments as a proportion of non-food expenditure (a proxy for disposable income) has remained stable. This situation is consistent with evidence from other Asian countries in the late 1990s[44,45] showing that the mean out-of-pocket budget share in Sri Lanka was quite low in comparison with other Asian countries at similar income levels; and that better-off population groups spent a larger fraction of their resources than did the poorer population on health care sought in the private sector.

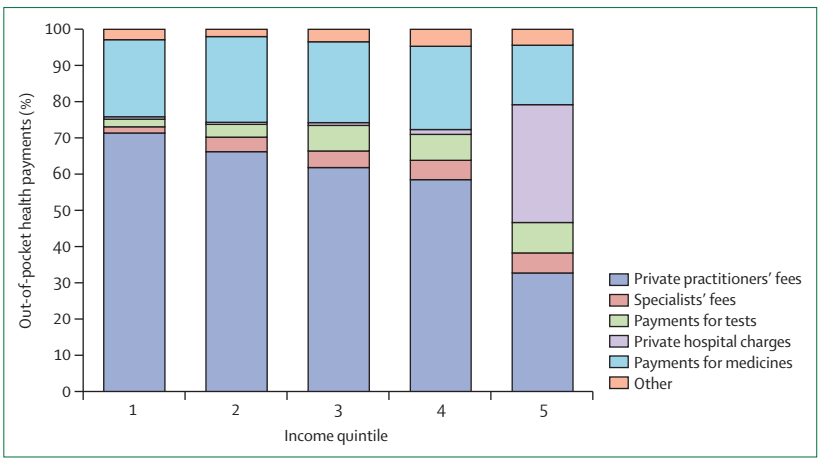

Figure 2: **Structure of out-of-pocket health payments by income quintile, Sri Lanka 2009–10**
Values were calculated from the Sri Lanka Household Income and Expenditure Survey data (2009–10).[42]

High-cost private sector heading a stratified system: Argentina and South Africa

Countries with this type of private sector have relatively high shares of private and social insurance in health spending (table 1), and substantial private sector activity in secondary and primary care alongside low public sector reliance on charges.

South Africa and Argentina are two middle-income countries in which the share of private plus social insurance in total health spending is greater than 40% (table 1). This health insurance finances a private sector of hospitals and clinics serving the higher income population groups. In the two countries, the private sector therefore forms what Latin American health analysts call a private sub-system,[46] providing high-quality care at the top of a stratified health system in which the poor generally rely on lower quality public provision.[47] In both countries, the public sector formally imposes low or no charges. The out-of-pocket payments in South Africa are made largely in the private sector by better-off people who have catastrophic illness insurance cover only, paying out-of-pocket for ambulatory care. In Argentina, the wealthiest quintile spend 36% of their total payments for health care on insurance premiums: most insurance is bought by the top two quintiles who also make most of the out-of-pocket payments for outpatient visits. Conversely, the poorest two quintiles spend out-of-pocket mainly (61%) to buy drugs.[46]

Despite their different culture and history, the private sectors of South Africa and Argentina share several institutional characteristics. Both countries have high social and economic inequalities reinforced by stratified health care, and private care is also geographically concentrated where incomes are highest. In South Africa, a 2008 survey showed that 72% of health-care visits by the richest quintile and 89% of visits by those with medical insurance were to the private sector, whereas the percentages for the poorest quintile and the uninsured were 13% and 19%, respectively.[24] South African private medical schemes began under apartheid as occupational schemes with income-related payments; deregulation from the 1980s shifted the sector to risk-rated commercial insurance. The insurers consolidated in the 1990s into three dominant firms, while private hospital ownership shifted from doctor-owned to corporate.[48]

In Argentina, a social health insurance sector owned and managed by trade unions was opened to risk-rated commercial insurance in the 1990s, allowing private insurers to compete to insure employees and encouraging social health insurers to buy care from private facilities. The 1990s reforms divided this market into management-level employees and the rest, and social health insurers for management-level employees mostly purchased services from the private sector. Thus, the system switched from one fragmented by lines of business (or trade unions) to one stratified by socioeconomic status, separating white-collar workers from the rest of the insured population. In Argentina in 2010, 63% of health-care visits by the richest quintile were to the private sector, compared with 28% for the poorest quintile[23] Between 1969 and 1995, the number of private health facilities nearly quadrupled,[49] increasing from

	Total number of hospitals	Ownership type
1980	9902	Public dominant
2000	16318	Public dominant but with strong for-profit incentive
2008	19712	9777 government, 6048 public enterprises, and 3887 individual

Data are from Ministry of Health, China National Health Yearbook, 2009.[52]

Table 3: **Hospitals in China by ownership type (1980–2008)**

Panel 2: Reversal of public identity–private behaviour health care—China's third reform

China's third wave of health reform, initiated in 2009, aimed to reverse the laissez-faire health-care market through government investment of about US$124 billion during 2009–11. Since 2012, China has introduced a range of regulatory instruments: formation of a wider financial pool to leverage influence over provider behaviour; expansion of the clinical pathways (clinical diagnostic and treatment protocols or guidelines) programme to more hospitals; and piloting of service payment methods such as capitation, by case, by episode, by block contract, and by rudimentary types of Diagnosis Related Group.

To remedy the public identity–private behaviour hospital sector, the regulatory measures taken by China include the conversion of 20% of total hospital beds into "true" private hospital beds, and expansion of private investment with standard corporate governance practices. A zero drug price mark-up is to be implemented strictly, replacing the mark-up with physician prescription charges to delink the arguably corrupt connection between drug sellers and care providers. Public hospital governance structures are to change to specify hospital accountability to the health department and also the general public. A hospital administration agency will oversee public hospital performance and regulate the non-state hospitals. Finally, government investment in the rural health insurance scheme will total around ¥360 per farmer, aiming to integrate all public schemes into a single prepaid pool that can affect provider behaviour.

	1978	1985	1993	1998	2003	2008	2011
Urban	≥90%	NA	72·2%	55·9%	55·2%	71·9%	90·9%
Rural	≥90%	7·0%	15·9%	12·7%	21·0%	92·5%	97·4%

Data sources: data for 1993, 1998, 2003, and 2008 are from China Ministry of Health: National Health Survey in 1993, 1998, 2003, and 2008. Data for 1978 and 1985 are from Wang et al.[58] Data for 2011 are from Meng et al.[59] NA=not available.

Table 4: **Health insurance coverage in China (1978–2011)**

around a third to more than 50% of the total. In the early 2000s, international companies from Switzerland, USA, and Latin American countries entered the Argentinean private health insurance market, greatly increasing concentration.[50] By 2006, the three largest private insurers accounted for about 65% of revenues and 60% of affiliates in the private insurance sector.[51]

This stratified system, when deregulated for a lengthy period in each country, led to a rapid escalation in private insurance premiums and private sector costs. The cost drivers were a mixture of monopoly power on the part of private suppliers, individual risk-rating driving out lower income and lower risk individuals, and competition on the basis of offering high technology and specialist care.[48] In South Africa, the deregulation of the 1990s produced a sharp upward shift in trend increases in costs; after 2000, reregulation slowed the continuing rise. In Argentina, the reforms in the 1990s increased private health insurance expenditure through the deregulation of social health insurance, with little increase in coverage. Health spending increased from 8·2% to 9·0% of the GDP between 1995 and 2000, private insurance rose from 0·9% to 1·3%, and out-of-pocket expenditure from 2·3% to 2·7% of GDP during this period, mainly as a result of deregulation of social health insurance and contracting with private providers.

Highly commercialised public sector undergoing reform: China

China is an example of country with a relatively high but now falling share of private expenditure (table 1), a small private sector, and a commercialised public sector heavily reliant on fees and charges, which is now being reformed.

Many low-income and middle-income countries have introduced charges for public sector health services. China is a good illustration, with useful lessons for less extreme cases, of the emergence of public sector commercialisation from ad-hoc reform, of its effect, and of the scope for tackling perverse market effects through subsequent holistic health system reform.

China, in its two waves of health reform in the 1980s and 1990s, developed a globally extreme level of commercialisation of its public sector health care—an unintended side-effect of the market-oriented economic reforms (table 1). By 2001, government funding had fallen to only 8·6% of urban hospital income and 12·8% of rural township health centre income.[27] The public health-care facilities gained various degrees of autonomy and self-governed status: they were not privatised in the sense that the assets are still owned by the state, so the facilities had a public identity, yet their daily operations took on a business nature, focusing on revenue generation from charging users, translated into private gains through hospitals' internal bonus allocation system. This was the market incentive installed by the initial health sector reform. The privately owned sector remained small, accounting for just 20% of urban hospitals in 2008 (table 3), and private health insurance did not have a notable effect.[53] In rural areas, health insurance coverage effectively collapsed, although social insurance provided some urban coverage for employed people.

China thus developed publicly owned commercialised health care. Key consequences included a focus by hospitals on generating income through high mark-ups on privately procured drugs, resulting in inappropriate and unnecessary prescribing,[54,55] and frequent use of high technology-based medical procedures and advanced medical surgery. The fee-for-service payment method

drove up out-of-pocket spending and incentivised over-prescription and over-charging, while detailed itemisation of services increased revenues and encouraged high-cost, high-volume service competition. A large proportion of these revenues were given to the doctors.[56] Rates of exclusion from care rose, especially in rural areas. Admission to hospital became too expensive for many farmers. 64% of those who should have been hospitalised could not be admitted in 1998, increasing to 75% in 2003. During the same period, health impoverishment—defined as poverty caused by out-of-pocket payments—increased from 22% in 1998 to 33% in 2003.[57]

China's third reform, initiated in 2009, aimed to reverse this situation of public identity–private behaviour health care (panel 2), expanding health insurance rapidly (table 4). Overall, the scale of this reform of public governance shows the challenge in returning a commercialised public system to its public purpose. It includes governance reform; the development of budgeting and financial accounting system for hospitals under self-governed status; independent accreditation involving detailed surveillance; and medical dispute settlement procedures. The policy directive in 2013 for independent accreditation of hospitals in 2013, halted for nearly two decades, represents progress.

Stratified private sectors shaped by low incomes and public sector characteristics: Tanzania, Malawi, Ghana, and Nepal

Countries with this type of private sector had high private expenditure shares in the year 2000, mainly falling over time (table 1); a stratified private sector with hospitals and clinics for better-off population groups, and substantial use of private shops, especially by poorer people; and varying public sector reliance on fees and charges, affecting private sector demand.

A diverse private health sector in many lower income countries has been shaped by the changing characteristics of the public sector, driven by deregulation. In many settings, the private sector has challenged or superseded public sector dominance. Common trends are the rise of private shops and pharmacies as a location for treatment which is often of poor quality, alongside increasing inequalities in the use of private secondary facilities for care.

This section uses illustrative qualitative and quantitative evidence for Ghana, Malawi, Tanzania, and Nepal, selected as examples of lower income countries with a socially stratified private health sector (panel 3; figures 3 and 4). They include a subsector of secondary level private clinics and hospitals attended in growing numbers by higher-income population groups.[66,67] These higher end facilities are perceived to offer superior care and facilities, by contrast with the perceived and actual failings of the public health sectors.[66] However, within the private sector, there is generally a preponderance of visits to small private dispensaries, shops, and pharmacies.[68] Deregulation has allowed smaller scale and poorer quality providers to multiply, with shops and pharmacies effectively offering widespread first-line treatment, selling poorly

Panel 3: Private sector stratification and public sector interaction—evidence from the Demographic and Health Surveys

Demographic and Health Surveys[7] allow us to analyse trends in private sector shares in activity, but they collect data only for treatment of two childhood illnesses (diarrhoea and fever) and for place of delivery at birth. For four low-income countries—Ghana, Malawi, Tanzania, and Nepal—the locations to which children under 5 years of age were taken for treatment for episodes of diarrhoea in the 2 weeks before each survey were calculated for successive surveys (figure 3, figure 4). Detailed categories of places for treatment were grouped into public, private, and religious facilities at both primary and secondary levels, plus shops or pharmacies and traditional healers.

Figure 3 shows the percentage of infants taken to a private secondary facility, defined in the survey as a private hospital or clinic, split by quintile of asset wealth (for information on wealth quintiles, see Filmer and Pritchett[60] and Rutstein and Johnson[61]). A clear difference exists between income groups in most countries for all years; Tanzania is a partial exception.

Figure 4 shows the percentage of visits of infants for diarrhoea treatment to private providers, broken down by visits to shops or pharmacies and to private primary and secondary health facilities. Also shown is the percentage of infants taken to public facilities, which in Malawi and Tanzania are the most common place of treatment. Visits to shops and pharmacies form the majority of private sector visits in all countries, except for the first and last year in Malawi.

The data suggest that public sector characteristics affect use of the private sector. In Malawi, where the public sector has historically been little commercialised (formally or informally; table 1) but gaps in provision have encouraged recourse to shops,[62–64] the 2004 Essential Health Package, free in public and some faith-based facilities, was associated with a reduction in shop use. In Ghana, where public sector charging is widespread, expansion of national insurance was associated with a decrease in shop use, although that fall has stagnated since 2008. In Nepal too, fewer children were cared for in shops or pharmacies after the 2009 reforms that allowed free access to primary care for treatment and drugs.[65] Meanwhile, in Tanzania, where charging continues, shop use remains high and stable.

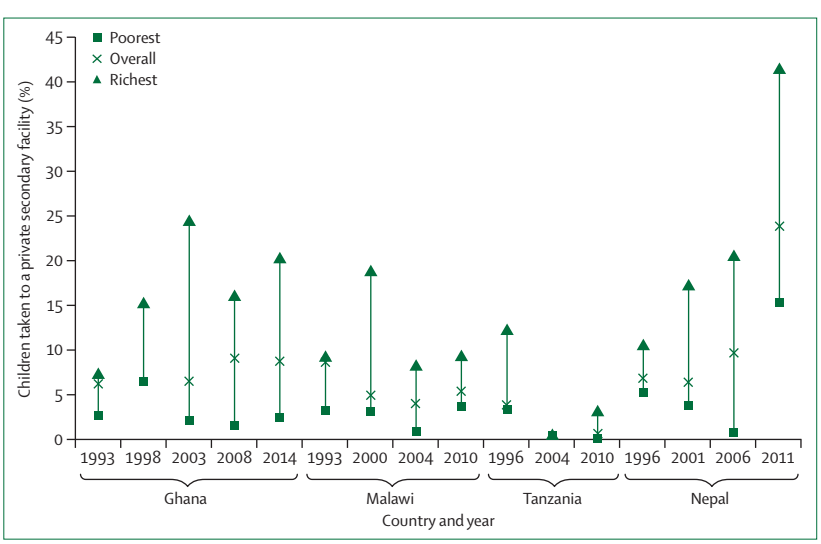

Figure 3: Percentage of infants treated for diarrhoea who were taken to a private secondary facility by wealth level, year, and country

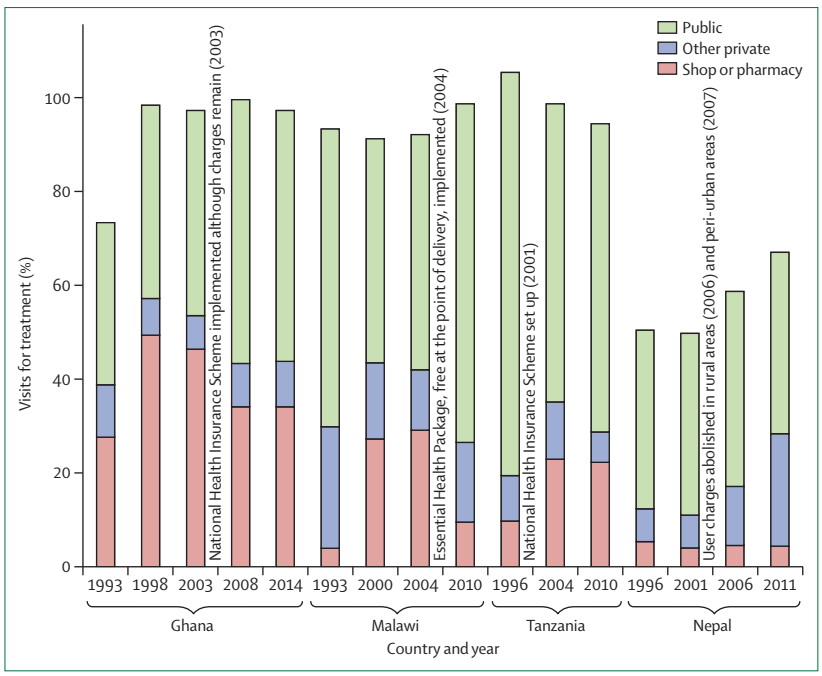

Figure 4: **Percentage of infants who were treated for diarrhoea taken to shops or pharmacies, other private facilities, and public sector facilities, by country and year, with key health reforms**
Note that percentages might add up to more than 100% because of visits to multiple locations for care.

regulated medicine supplies directly to users.[69,70] When the public sector charges for care and treatment, legally or illegally, people have often shifted to low-quality, low-cost treatment from untrained shop assistants, although the efficacy of the treatment received is highly questionable.[11,71]

Conclusions

We have shown that, for several illustrative countries, existing data can be used to compile a comparative, although not wholly comparable, understanding of different private health sectors, including the segment(s) of the population served. The patterns implied by the three metrics proposed in this report (table 1) can be used in conjunction with qualitative evidence to generate an emerging typology of the roles of private sector health care within mixed health systems in low-income and middle-income countries, and their consequences for access to care. Countries can be grouped by key characteristics, including the pattern of stratification of private sector use, the scale and accessibility of public provision, and the extent of reliance of the poor on out-of-pocket payment.

We have also shown, through the analysis of data on four low-income countries, and by the contrast between Sri Lanka and India, that the public sector's size and behaviour can affect the patterning of private sector roles and behaviour. The cases of South Africa and Argentina demonstrate the interaction between their particular configuration of the private sector and social stratification, with consequences for inequality. The case of reform in China illustrates the effect of public sector organisational change on the position of the private sector. A reinvigorated and accessible public sector, sometimes alongside major expansion of social insurance, can reshape private sector roles and behaviour within mixed health-care systems in low-income and middle-income countries to support moves towards universal health coverage.

Contributors

MM coordinated the article with AC. MM drafted the introductory and overview sections and undertook overall editing of the article. AK and SS drafted the section on India. HZ drafted the section on China. EC drafted the material on Sri Lanka and Argentina. AC drafted the section on Tanzania, Nepal, Ghana, and Malawi. All authors contributed to design of consecutive drafts, read and commented on all drafts, provided data and ideas for the article as a whole, and approved the final draft.

Declaration of interests

We declare no competing interests.

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